



Serial No. 08/239,978

Filed: 5/9/94

Docket: ATI-77

Inventor: BREED, David S.

Title: "VEHICLE INTERIOR IDENTIFICATION AND MONITORING SYSTEM"

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

RECEIVED  
55 MAR 13 AM 6:54  
Art Unit: 3106  
GROUP 310  
Examiner: Tyson, K.

*M. ...*  
*3-15-96*  
*4#*

RESPONSE TO REQUIREMENT FOR RESTRICTION  
PRELIMINARY AMENDMENT

The Applicant hereby submits herewith a Preliminary Amendment, *infra*, which eliminates any known ambiguity and should also traverse the Requirement for Restriction without more.

As required nevertheless in response to the Requirement for Restriction dated 12/28/94, the Applicant, having been required to elect one of the Examiner-defined groups, elects Group IV, a vehicle monitoring system controlling a vehicle safety system, classified in class 280, subclass 735 (claims [as renumbered] 21-27, 35-37, 49).

The Applicant believes that the invention unity is that of the "pattern recognition means" or "Vehicle Interior Identification and Monitoring System" [the title], "more sophisticated means to identify objects within the passenger compartment" (see p. 1 last line, p. 2 first line), "a device to monitor the vehicle interior and identify its contents is needed to solve these and many other problems" (p. 2 lines 14+), "The above applications illustrate the wide range of opportunities which become available if the identity and location of various objects and occupants, and some of their parts, within the vehicle were known. . . ." (p. 3 bottom, p. 4 top), "The present invention adds more sophisticated pattern recognition capabilities such as fuzzy logic systems, neural network systems or other pattern recognition computer based algorithms to the occupant position measurement system disclosed in the above reference copending patent application and greatly extends the areas of application of this technology. An example of such a pattern recognition system using neural networks..." (p. 4 last paragraph), "'Pattern recognition' as used herein will mean..." (p. 5 line 2),

"The VIMS can then respond to the temperature of the occupant, which can either be a child in a rear facing child seat or a normally seated occupant, to control some other system. [emphasis mine].

"In each case a pattern recognition system, as defined above, is used to identify and classify..." (p. 6, l. 7),

"Nevertheless, if the monitoring system is present it can be used to control the HVAC for a small increment in cost. ..." (p. 17, 11. 9+),

"The output of the processor 101 of the monitoring system is shown connected schematically to a general interface 290 which can be the vehicle ignition enabling system; the entertainment system; the seat, mirror, suspension or other adjustment systems; or any other appropriate vehicle system. (p. 20, 11. 15+).

In any event, the above quotations from the application support the unity of invention of a single processor pattern recognition-based vehicle identification and monitoring system capable of performing multiple tasks within a vehicle-- not merely a single task, as implied by the multiple groupings of the Requirement for Restriction.

The following are the groupings made by the Examiner. The Applicant believes that the invention is a pattern-recognition-based vehicle monitoring system ("VIMS") which controls various multiple potential tasks and such is the essence of the invention, as the above quotes from the application support.

The Examiner-made groupings are:

Group I, a vehicle communication system having a vehicle monitoring system, classified in class 379, subclass 58 [renumbered claims 3,12, 31];

Group II, a vehicle entertainment system or directional microphone having a vehicle monitoring system, classified in class 381, subclass 86 or 92 [renumbered claims 4,13,30,32, and 59];

Group III, a heating and air conditioning system having a vehicle monitoring system, classified in class 454, subclass 75 [renumbered claims 5,6,7,14,15,16,37,50, and 56];

Group IV, as elected above, a vehicle monitoring system controlling a vehicle safety system;

Group V, a light filtering system with vehicle interior monitoring, classified in class 362, subclass 61 [renumbered claims 38-45];

Group VI, a sound cancellation system having a vehicle interior monitoring, classified in class 381, subclass 71 [renumbered claim 46];

Group VII, a vehicle unauthorized user detection system and vehicle control, classified in class 180, subclass 287 [renumbered claims 53-55];

Group VIII, a vehicle seat control system, classified in class 296, subclass 58 [renumbered claim 58].

Claims 61 and 62 considered members of both Groups IV and VII.

Please note that the Examiner has characterized each Group system as a special purpose system having a vehicle monitoring system as a subcomponent. The Applicant respectfully disagrees. It is the other way around!

To avoid any ambiguity as to the specificity of the VIMS, the Applicant makes the following Preliminary Amendment to the claims to clear up said potential ambiguity and which should

automatically traverse the Requirement for Restriction.. Thereupon, the Applicant respectfully disagrees that there are "two or more independent and distinct inventions claimed in one application" pursuant to 35 U.S.C. 121, which would support a Requirement for Restriction ( see MPEP 802 et seq. [especially definition of "independent"], MPEP 802.01, 806(3)). As noted above, the unity of invention is the pattern-recognition-based interior monitoring system ( also see MPEP806.05(c)(2) subcombination essential to combination , 808.02 related inventions, linking inventions ).

#### PRELIMINARY AMENDMENT

Please enter the following:

#### IN THE CLAIMS:

1. (amended). In a motor vehicle having an interior passenger compartment containing at least one occupying item having surfaces, an interior monitoring system comprising:

a) Means to illuminate a portion of said vehicle interior passenger compartment;

b) Means to receive reflected illumination from said surfaces within said vehicle interior passenger compartment;

c) Means to process said received illumination to create an electronic signal characteristic of the contents of said passenger compartment;

d) Pattern recognition [M]means to categorize said electronic signal; and

e) Output means in response to said categorization to affect [another] at least one other system within said vehicle.

10 (amended). In a motor vehicle having an interior passenger compartment containing at least one occupying item having surfaces, an interior monitoring system comprising:

a) Means to illuminate a portion of said vehicle interior